

# Innovation.bg

## Scanning the Bulgarian Innovation System

### EUROPEAN OPPORTUNITIES FOR IMPROVEMENT OF REGIONAL INNOVATION POLICIES

April 11 2012

Varna

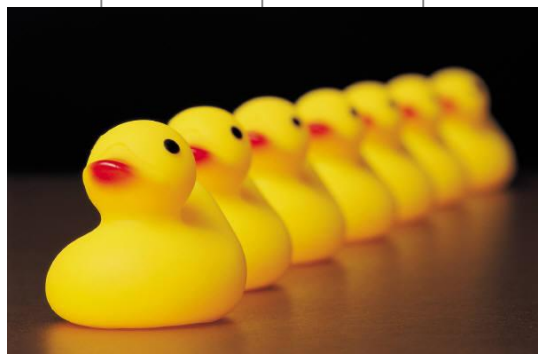
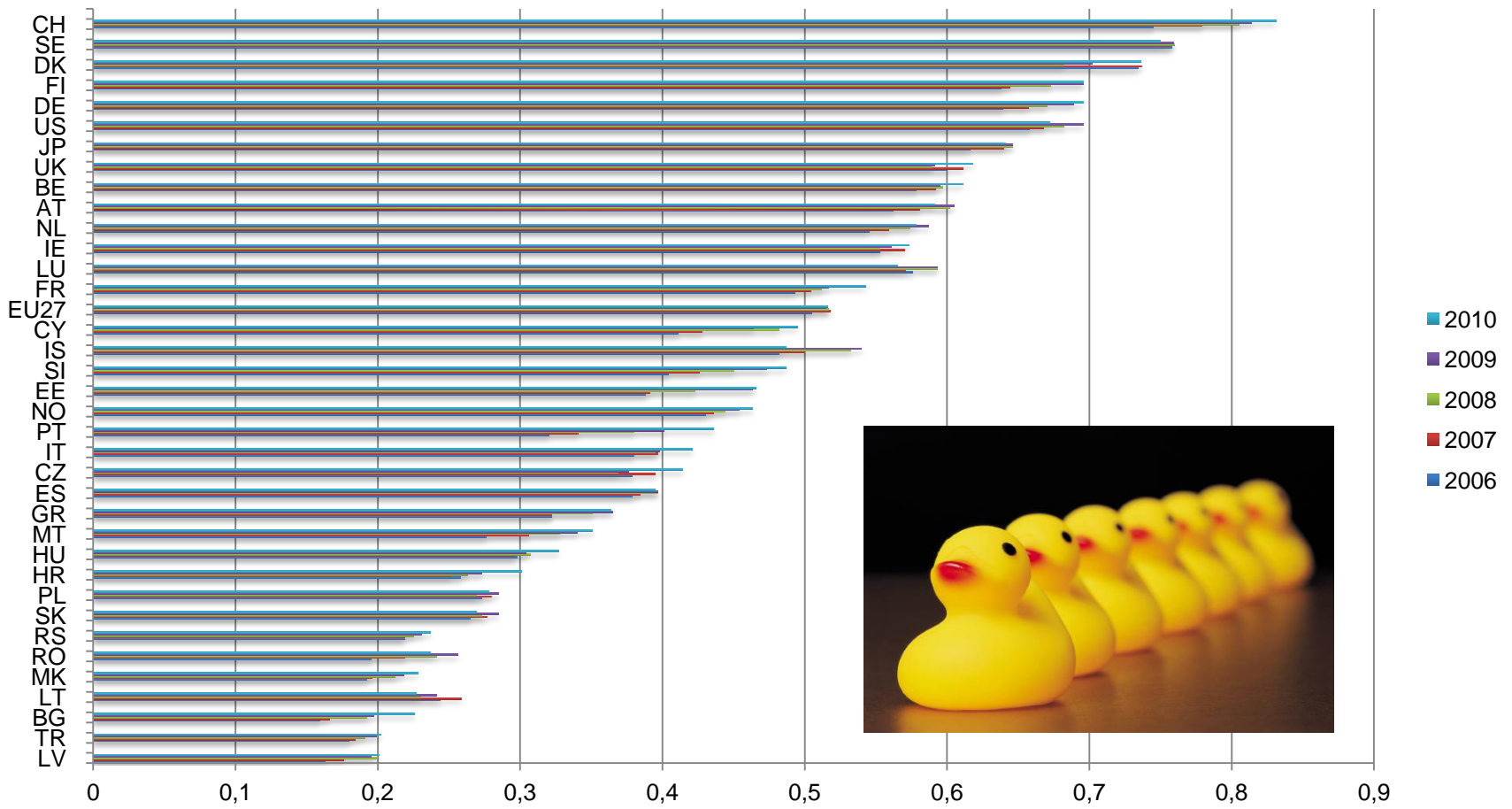
Todor Yalamov  
Coordinator of ITGroup,  
ARC Fund

# Contents

- The evolution of innovation policy
- European union innovation policy & benchmarking + some other examples
- Innovation.bg case study: setting up national program for monitoring innovation activity and policy assessment
- Hints for innovation scanning of SMEs

Picking up from where we left

# IUS: One hat fits all?



# Massachusetts Technology Collaborative: Index of the Massachusetts Innovation Economy



<b>ECONOMIC IMPACT</b>	
1.	Industry Cluster Employment and Wages .....
2.	Occupations and Wages .....
3.	Household Income .....
4.	Industry Output and Manufacturing Value Added.....
5.	Productivity .....
6.	Manufacturing Exports.....
<b>RESEARCH</b>	
7.	Research and Development Performed .....
8.	Performers of R&D .....
9.	Academic Article Output.....
10.	Patenting .....
11.	Patenting by Field .....
<b>TECHNOLOGY DEVELOPMENT</b>	
12.	Technology Licensing .....
13.	Small Business Innovation Research Awards.....
14.	Regulatory Approval of Medical Devices and Pharmaceuticals .....
<b>BUSINESS DEVELOPMENT</b>	
15.	Business Formation .....
16.	Initial Public Offerings and Mergers and Acquisitions.....
<b>CAPITAL</b>	
17.	Federal Funding for Academic, Nonprofit, and Health R&D.....
18.	Industry Funding of Academic Research .....
19.	Venture Capital .....
<b>TALENT</b>	
20.	Education Level of the Workforce .....
21.	K-16 Education.....
22.	Public Investment in K-16 Education.....
23.	Science, Technology, Engineering and Math Career Choices and Degrees.....
24.	Talent Flow and Attraction.....
25.	Housing Affordability .....

# Innovation performance benchmarking: defining the right questions

- The international framework – given
- National path dependence specifics – given
- Define the right metrics to match national policy needs

# Innovation.bg >> the platform & the process

- Innovation.bg report: **policy research & analysis**
  - policy working group
  - expert council on innovation
  - business innovation club
- National Innovation Forum: **advocacy and awareness raising**
- Innovative Enterprise of the Year Award: **promoting excellence**

## Innovation.bg >> the policy report

- Annual report, evaluating the innovation performance of the national economy (2006 - )
- Methodologically based on CIS - EC; EIS - EC, STI Scoreboard – OECD, Massachusetts Innovation Economy Index
- Peer reviewed by the Expert Council on Innovation and the Business Innovation Club





# Innovation.bg >> the policy report >> content

- Policy and socio-economic background
- International/Europran benchmarking and comparative analysis
- Innovation Index of the Bulgarian Enterprises
- Five groups of indicators measuring RTDI performance
- Conclusion and policy Recommendations
- Special focus: sectoral innovation; regional innovation; FP 6; etc.
- Methodological annex & bibliography

## Innovation.bg >> the policy report >> groups of indicators

- Gross Innovation Product = output
  - Innovation product
  - Technological product
  - Science product
- Entrepreneurship (and networking) = input and links
- Investment and financing of innovation = input
- Human capital for innovation = input
- ICT as innovation driver = input and links

## Innovation.bg >> the policy report >> Innovation Index

- Integrated indicator for innovativeness at company level
- Measures/integrates four types of innovations:
  - product
  - process
  - marketing
  - organizational
- Based on nation-wide Survey of the Innovation Activity of Business Enterprises (INA)
- Panel data

## Innovation.bg >> why an index?

- Focuses attention
- Easier to grasp the complexity of the issue
- Media and decision-maker friendly
- Business friendly
- Accommodates national specifics

# Innovation.bg >> Innovation Index components

## 1. Product innovations

- 1.1. The enterprise has started to make products new to the company
- 1.2. The enterprise has started to make products new to the Bulgarian market
- 1.3. The enterprise has started to make products new to the international market

## 2. Process innovations

- 2.1. The enterprise has adopted production methods/processes new to the company
- 2.2. The enterprise has adopted production methods/processes new to the sector

## 3. Organizational innovations

- 3.1. The enterprise has adopted new or considerably improved management methods and systems
- 3.2. The enterprise has made considerable changes in the organization of work
- 3.3. The enterprise has established new or considerably changed relations with other companies in the value adding chain

## 4. Marketing innovations

- 4.1. The enterprise has made considerable changes in the design or the packaging of its products
- 4.2. The enterprise has applied new or considerably changed methods for the sale and distribution of its products and/or services

## Innovation.bg >> the policy report >> type of data

- Hard and soft indicators
- Statistical data
- Survey data
  - national representative survey
  - small-scale surveys
- Qualitative data
  - in-depth interviews
  - expert evaluations
- Micro-studies
  - web-based studies
  - large-scale-database analyses

# Innovation.bg >> the policy forum >> participants

- High-level representatives
  - Politicians (under the auspices of the President / Prime Minister)
    - Ministers
    - MPs / MEPs
    - Local authorities
  - Business leaders
    - Managers
    - Branch / professional associations
  - Representatives of international institutions
    - World Bank Mission to Bulgaria
    - EC / EU institutions
    - Enterprise Europe Network
    - European research institutions
  - Scientists and researchers
  - NGOs
- Media
- Presentations & Discussions



## The power of innovation

From left to right: Mr. Martin Dimitrov, Chairman, Economic Commission, Bulgarian Parliament; Professor Milanka Slavova; Mr. Rossen Plevneliev, President Elect; Mr. Tomislav Donchev, Minister of EU Funds; Mr. Ognian Trayanov, Technologika





**Everyone is invited**

## Innovation.bg >> the Innovative Enterprise of the Year Award

- Economy wide contest
- 3-stage methodology:
  - Open invitation, nominations and self-nominations = innovation performance questionnaires
  - Innovation audit and expert evaluation = proofreading
  - Jury = endorsement
- 2 categories
  - small enterprises
  - medium and large enterprises



## The photo op of the year

The winners with the PM

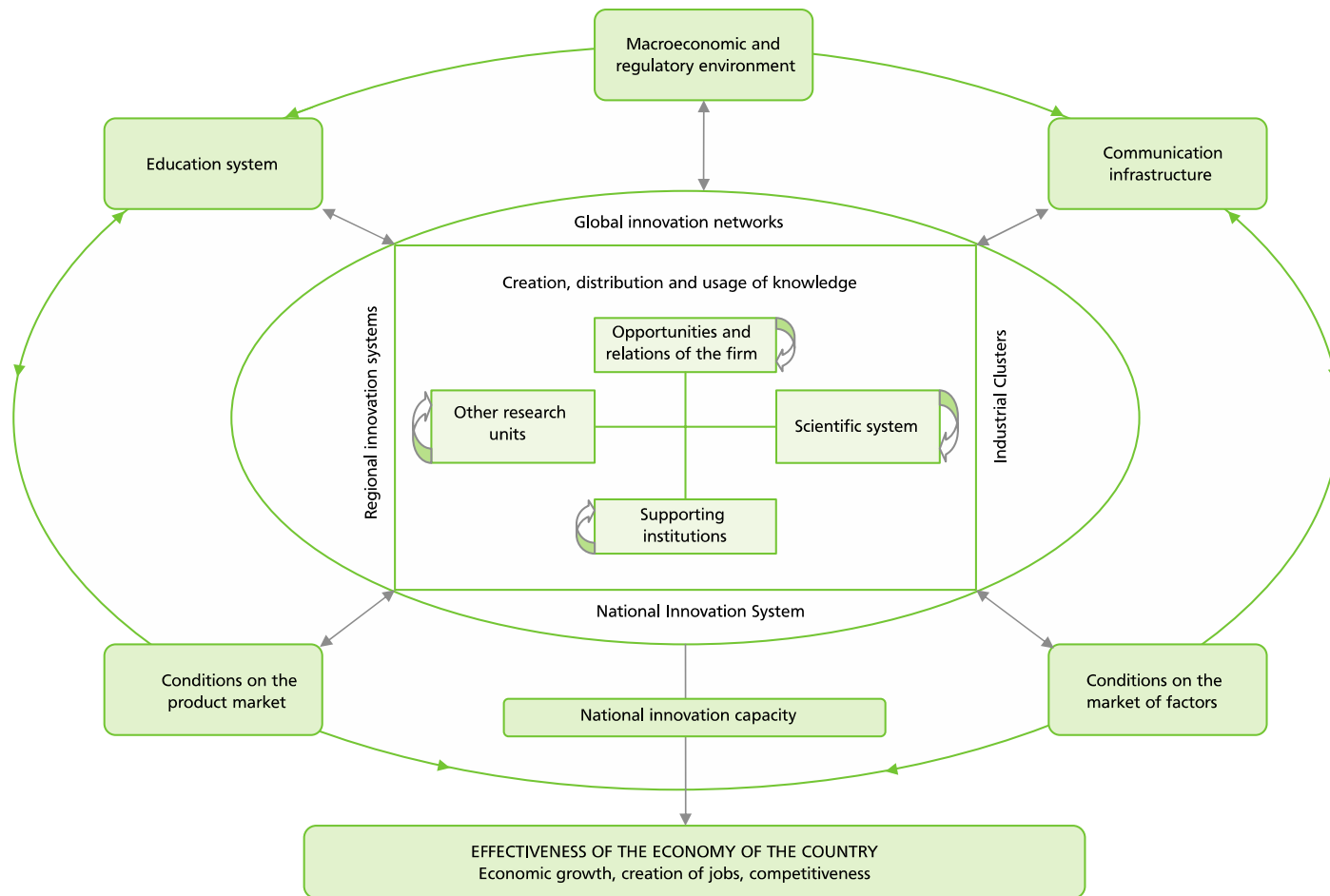
## Innovation.bg >> the daily updates

- National Innovation Council
- Advisory committees with key ministries
- Close cooperation with policy makers
- Communication activities are crucial
  - Make the media know, incl. web2.0
  - Policy briefs
  - Events' participation
  - Stay on message

Innovation.bg >> some examples

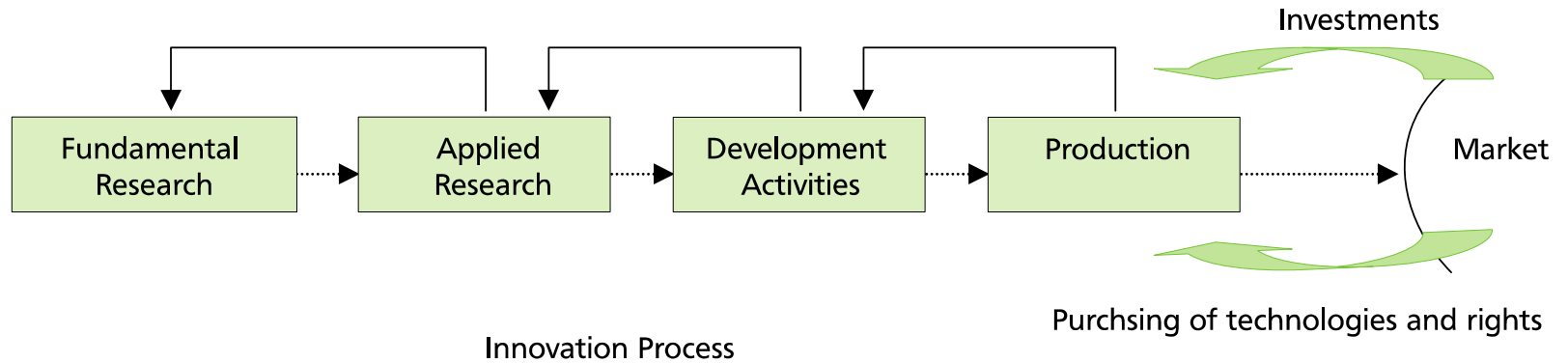
# Policy background and European dimensions

# Model national innovation system: participants and links



Source: Innovation.bg 2006 << OECD (1998): Technology, productivity and job creation. Best policy practices. OECD, Paris, p. 62.

# The innovation process cycle

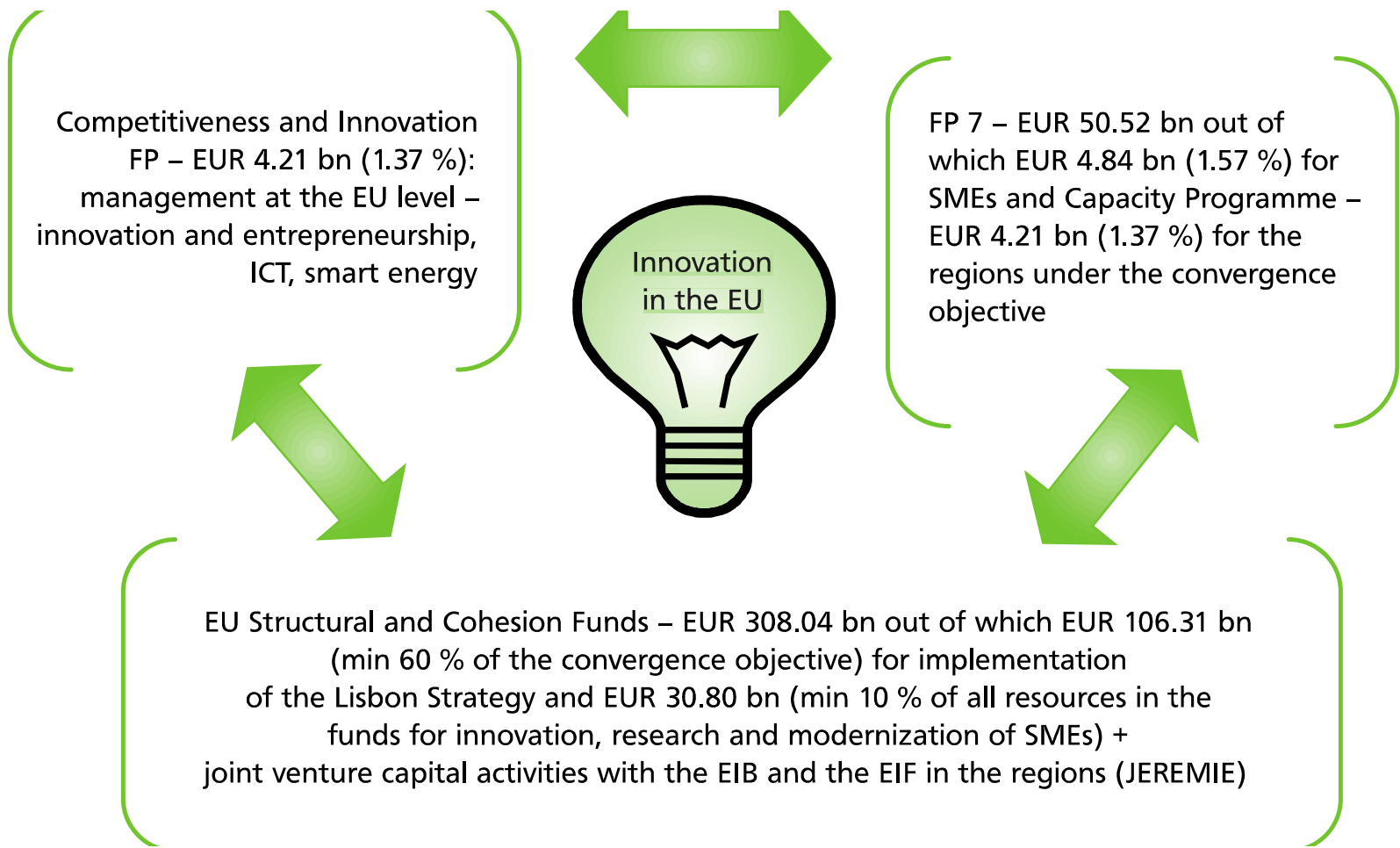




# EU policy development framework

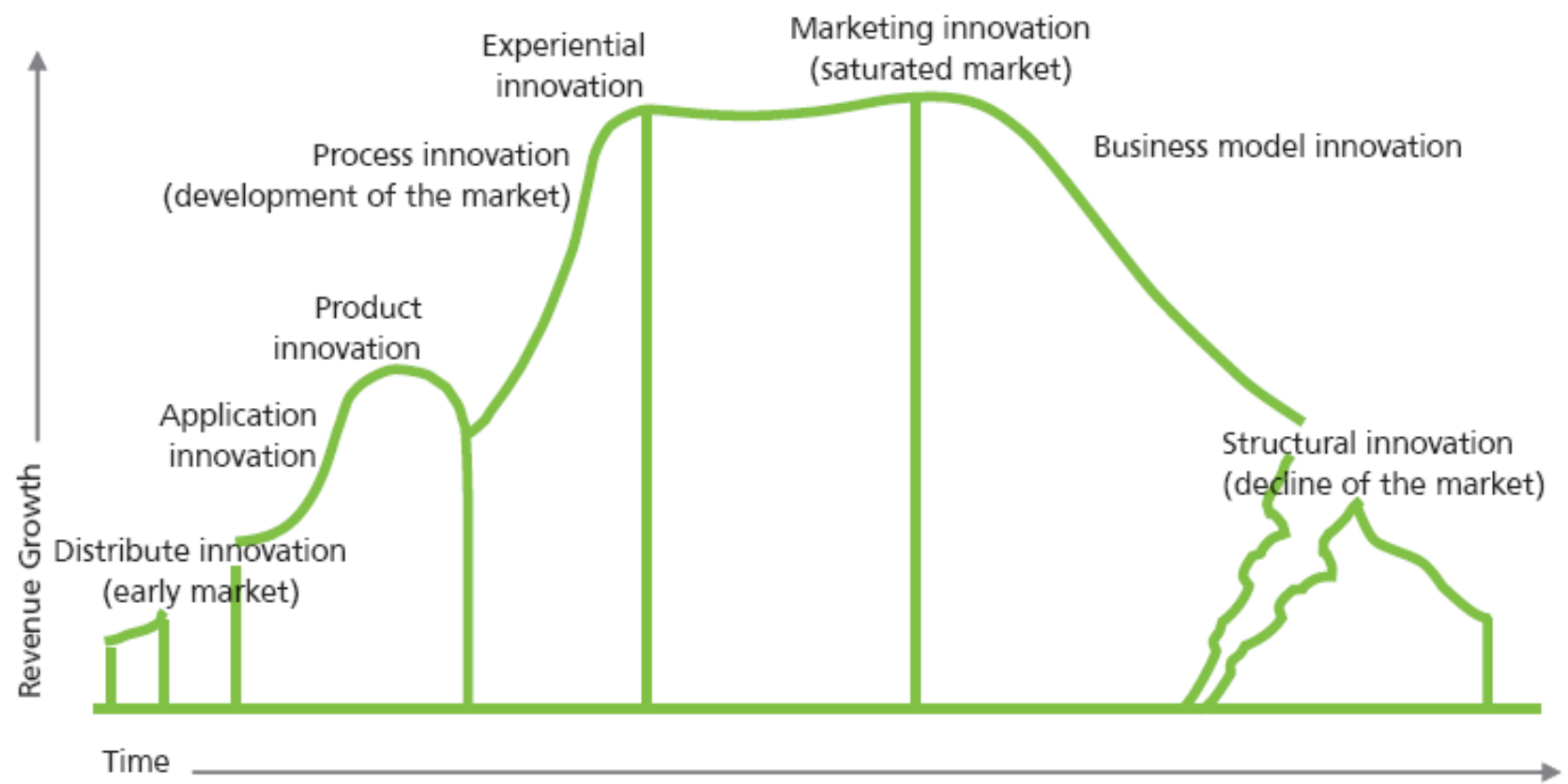


# Instruments for support of innovation in the EU



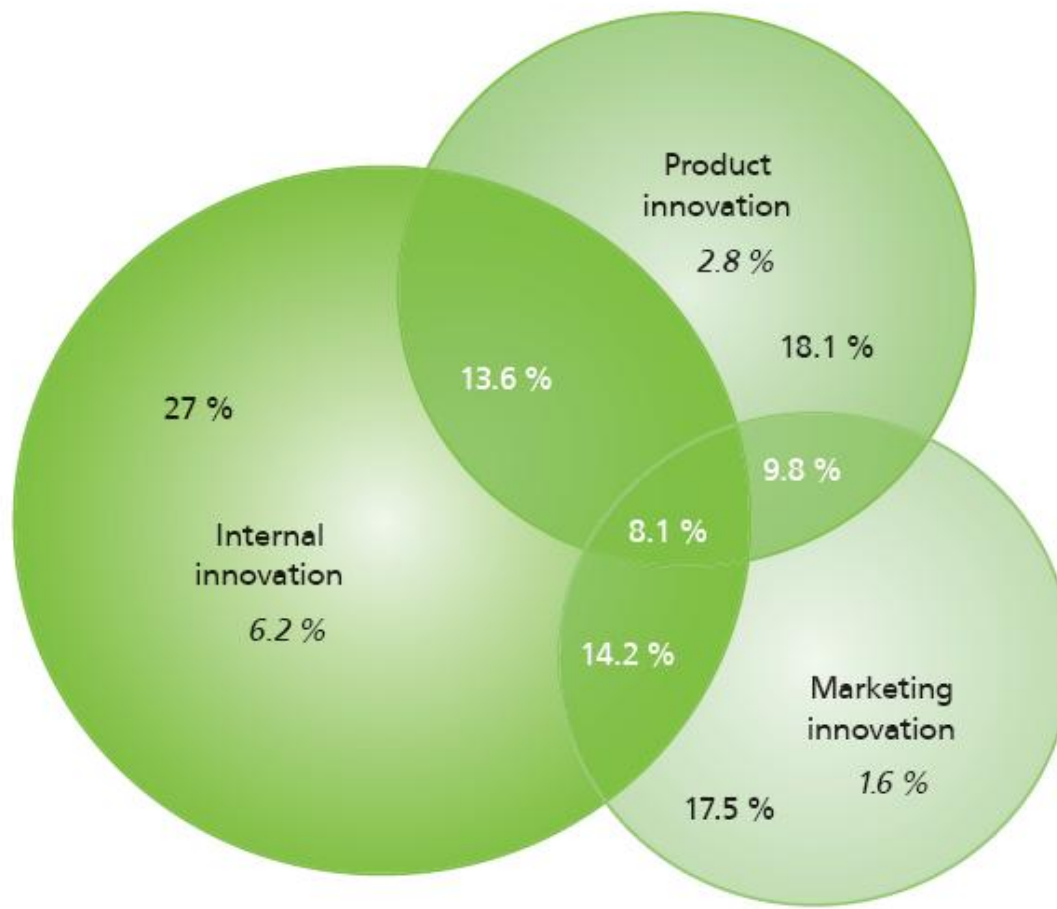
# Innovation Index of Bulgarian Enterprises: insights

# Market and Innovation Lifecycle

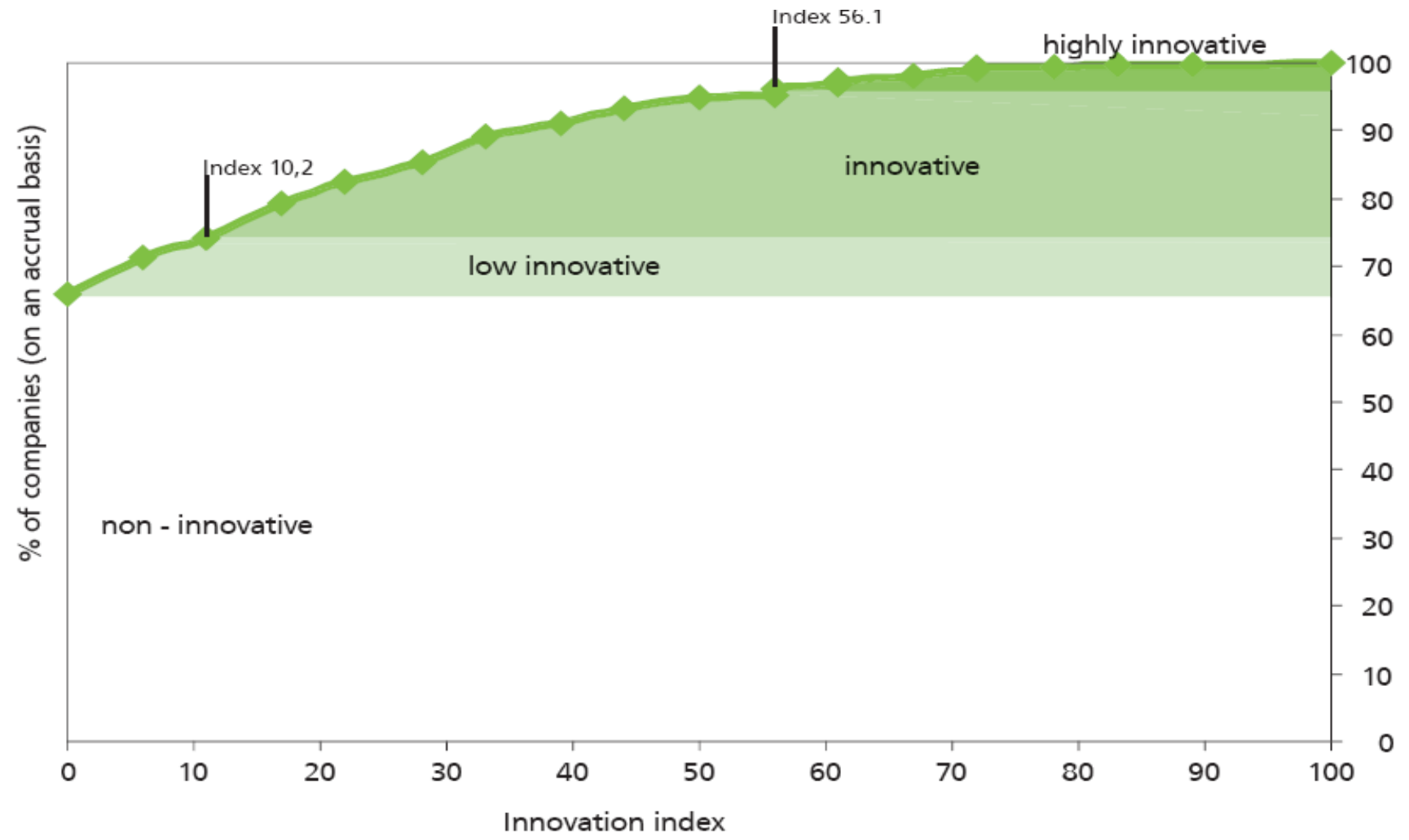


Source: Innovation.bg 2007 << Harvard Business Review, Moore, G., Darwin and the Demon: Innovating within Established Enterprises, 2005

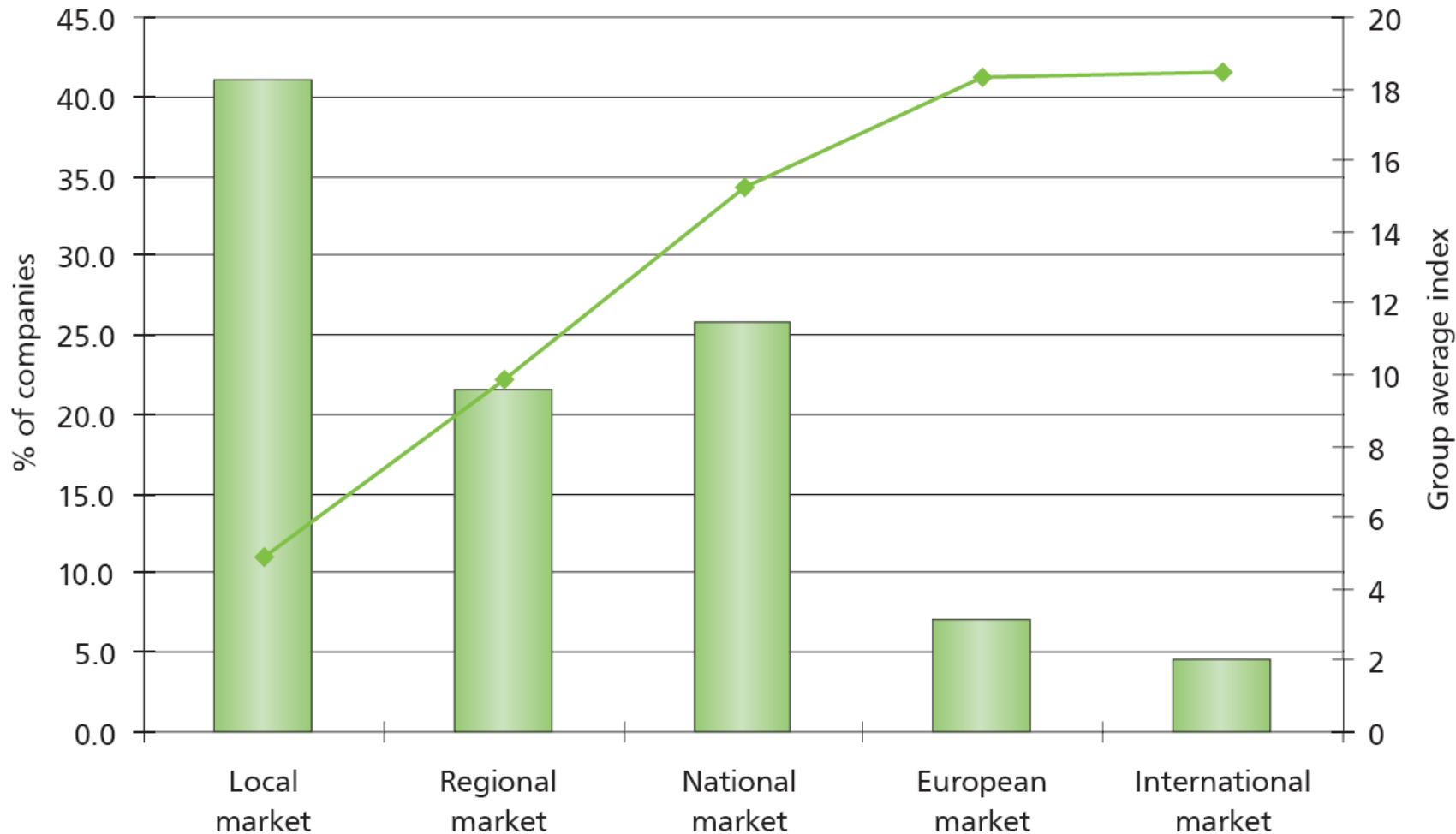
# Share of Bulgarian Companies by Type of Innovation They Have Introduced in 2006



# Innovation Index of Bulgarian Enterprises

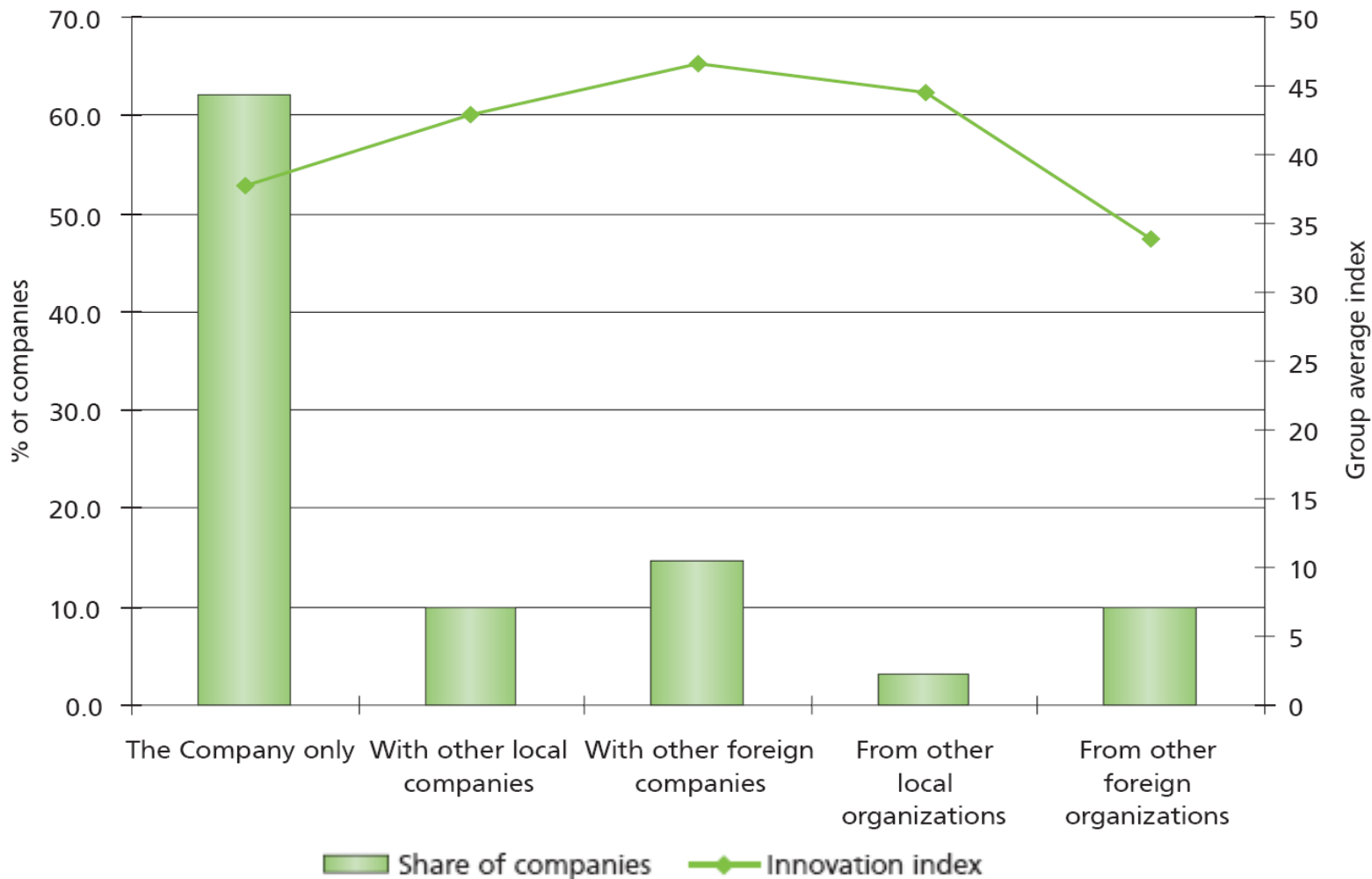


# Innovation Index of Bulgarian Enterprises and Their Primary Market



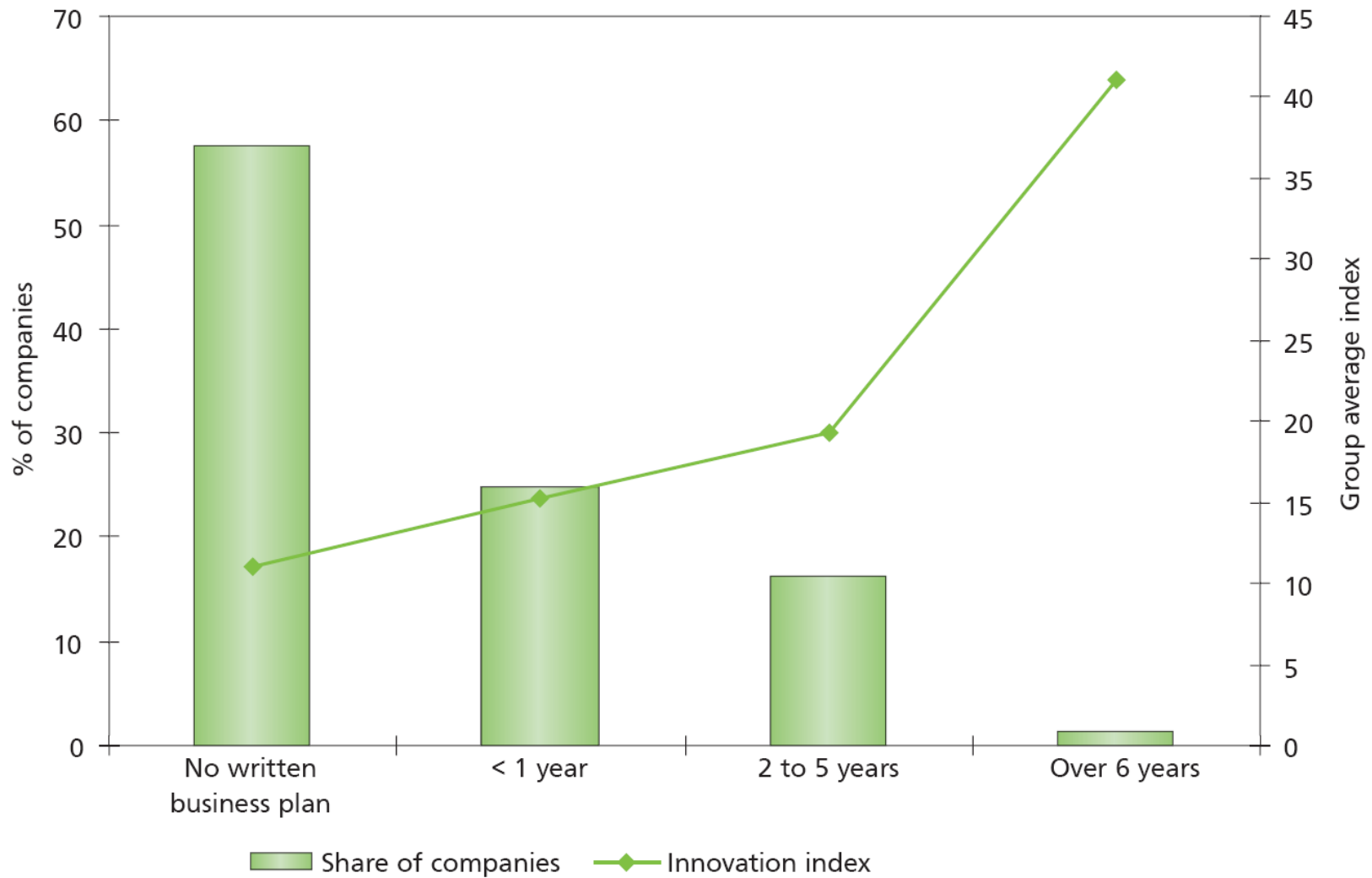
Source: Innovation.bg 2006

# Innovation Index of Bulgarian Enterprises and the Type of Cooperation They Engage in with Their Innovative Projects



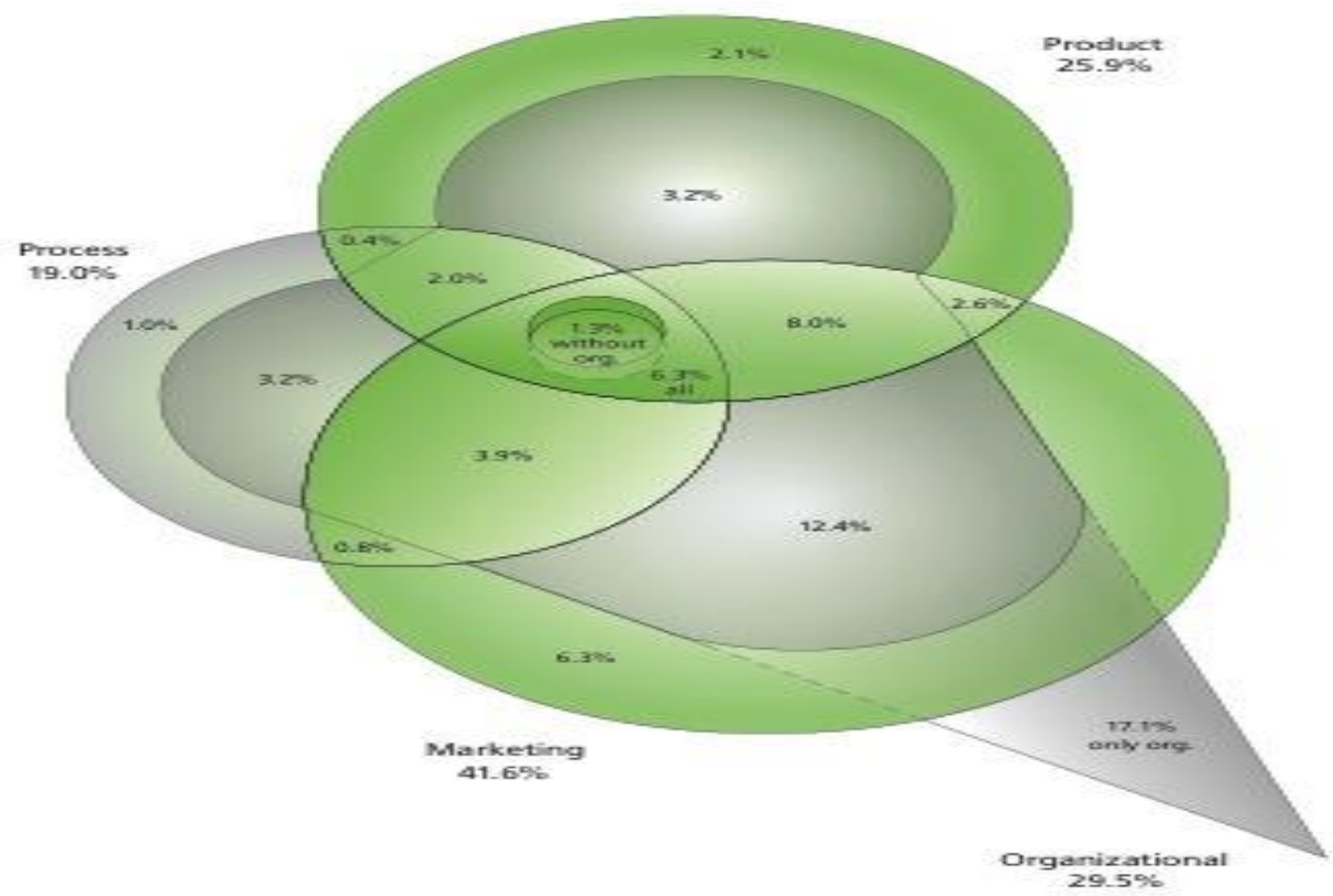


# Innovation Product Index of Bulgarian Enterprises and Their Planning Horizon

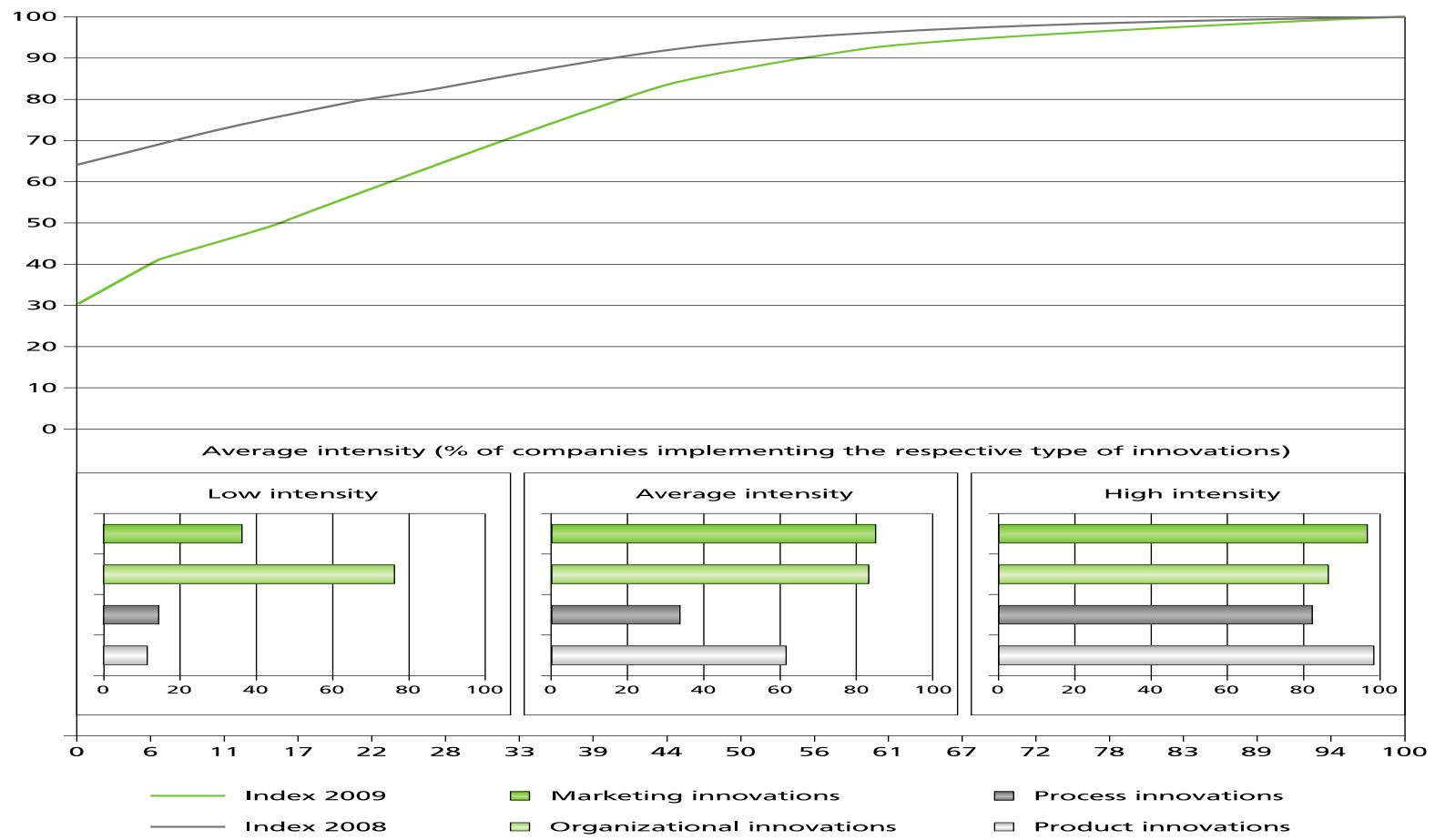


Source: Innovation.bg 2006

# Structure of Bulgarian enterprises by innovation type



# Innovation index of Bulgarian enterprises and leading innovations in Bulgaria



## Hints for innovation scanning

- The policy context and demand matters
- Path dependence matters – what are the specifics
- Think of new ways of portraying data
- What are the key questions you would like to answer?